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RESEARCH PAPER

Effect of tillage and mulching on soil moisture conservation and soil fertility cultivating pigeonpea (*Cajanus cajan* L.)

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Abstract : A field experiment was conducted to evaluate the effect of tillage and mulching materials on soil moisture conservation and soil fertility status. The study revealed that types of tillage did not have any significant effect on soil moisture content, soil pH, organic carbon, available N, available P and available K. Application of all the mulching materials significantly increased available N and available K as compared to control. The organic C increased significantly with all the mulching materials over control except in saw dust application. Application of saw dust, rice husk and plastic mulch caused an increase of 21.96, 10.73 and 13.80%, available P, respectively. On an average, addition of plastic mulch, saw dust, rice husk and straw mulch increased 81.25, 71.84, 70.27 and 64.02% moisture content, respectively as compared to control. The results from the study substantiate the importance of mulching materials for soil moisture conservation and improvement in soil fertility status.

Key Words : Mulch, Soil moisture, Available NPK

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